

# INTERNATIONAL SEARCH REPORT

PCT/GB 03/02509

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
IPC 7	C12Q1/48	G06F19/00 C12N9/12 C12N5/00 C07K16/00
C07K14/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols)		
IPC 7 C12Q C07K C12N G06F		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
EPO-Internal, WPI Data, BIOSIS, EMBASE		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 01/44497 A (UNIV DUNDEE ;ALESSI DARIO (GB); BIONDI RICARDO (GB))</p> <p>21 June 2001 (2001-06-21)</p> <p>cited in the application</p> <p>abstract; claims 1-63</p> <p>figure 15</p> <p>page 5, line 19 - line 30</p> <p>page 7, line 16 - line 30; table 1</p> <p>page 13, line 26 -page 14, line 7</p> <p>page 16, line 25 -page 18, line 30</p> <p>page 19, line 20 -page 20, line 2</p> <p>page 27, line 13 - line 30</p> <p>page 29, line 11 -page 30, line 10</p> <p>page 31, line 1 - line 6</p> <p>page 32, line 10 - line 17</p> <p>page 36, line 9 -page 37, line 2</p> <p>page 39, line 16 - line 23</p> <p>page 41, line 16 -page 42, line 5</p> <p>page 43, line 8 - line 30</p> <p>-/--</p>	<p>1-16,</p> <p>35-42</p>
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
25 February 2004		21. 06. 2004
Name and mailing address of the ISA European Patent Office, P.B. 6818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Vanhalst, K

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	page 45, line 19 -page 59, line 10 ---	
A	WO 01/35316 A (RAMNARAYAN KALYANARAMAN ;STRUCTURAL BIOINFORMATICS INC (US); HESS) 17 May 2001 (2001-05-17) abstract; claims 1-63 page 3, line 10 -page 9, line 19 page 36, line 10 - line 15 page 40, line 23 -page 41, line 25 page 50, line 25 -page 53, line 2 ---	1-16, 35-42
A	WO 01/71347 A (GODDARD WILLIAM A III;VAIDEHI NAGARAJAN; FLORIANO WELY B; CALIFORNIA I) 27 September 2001 (2001-09-27) abstract; claims 1-35 examples 1-5 page 3, line 24 -page 12, line 14 ---	1-16, 35-42
A	US 5 854 992 A (DEWITTE ROBERT S ET AL) 29 December 1998 (1998-12-29) abstract column 1, line 5 - line 13 column 2, line 23 - line 36 column 3, line 38 -column 5, line 31 column 8, line 29 -column 18, line 8 claims 1-10,12-18 ---	1-16, 35-42
A	WO 02/22793 A (ABELL CHRISTOPHER ;BLUNDELL TOM L (GB); ASTEX TECHNOLOGY LTD (GB);) 21 March 2002 (2002-03-21) abstract; claims 1-11 page 1, line 5 - line 7 page 3, line 12 -page 4, line 25 page 5, line 9 -page 7, line 22 page 8, line 5 - line 12 page 9, line 25 -page 10, line 9 page 11, line 10 - line 20 page 12, line 3 - line 13 page 15, line 1 - line 35 page 21, line 13 -page 33, line 26 ---	1-16, 35-42
A	WO 98/41638 A (MEDICAL RES COUNCIL) 24 September 1998 (1998-09-24) cited in the application abstract; claims 1-36 page 2, line 11 - line 14 page 21, line 26 -page 22, line 15 page 25, line 15 - line 28 page 27, line 20 -page 25 page 29, line 30 -page 30, line 29 ---	1-16, 35-42
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 00/56864 A (BALENDRAN ANUDHARAN ;UNIV DUNDEE (GB); ALESSI DARIO (GB); CURRIE R) 28 September 2000 (2000-09-28)  abstract; claims 1-33  page 14, line 14 - line 27  page 19, line 5 - line 9  page 19, line 26 -page 20, line 10  page 24, line 15 - line 30  page 27, line 4 - line 12  page 28, line 1 - line 17  page 29, line 19 - line 30  page 30, line 20 - line 26  page 31, line 11 -page 32, line 5  page 32, line 15 - line 30  page 33, line 15 -page 30</p>	1-16, 35-42
A	<p>US 6 387 641 B1 (BELLON STEVEN ET AL) 14 May 2002 (2002-05-14)  abstract</p>	1
A	<p>EP 1 096 014 A (AGOURON PHARMA) 2 May 2001 (2001-05-02)  abstract  page 3, line 28 -page 4, line 38</p>	1
A	<p>WO 00/70030 A (KINETIX PHARMACEUTICALS INC ;ZHU XIAOTIAN (US)) 23 November 2000 (2000-11-23)  abstract</p>	1
P,X	<p>BIONDI RICARDO M ET AL: "High resolution crystal structure of the human PDK1 catalytic domain defines the regulatory phosphopeptide docking site" EMBO (EUROPEAN MOLECULAR BIOLOGY ORGANIZATION) JOURNAL, vol. 21, no. 16, 15 August 2002 (2002-08-15), pages 4219-4228, XP002266843  ISSN: 0261-4189  the whole document</p>	1-16, 35-42

# INTERNATIONAL SEARCH REPORT

International application No.  
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## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 17, 18, 37  
because they relate to subject matter not required to be searched by this Authority, namely:  
Claim 17 and 18: Rule 39.1(i) PCT - Mathematical method  
Claim 37: Rule  
39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2. ☒ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-16, 38-42(fully); 33-37 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

**1. Claims: 1-16, 38-42 (fully); 33-37 (partially)**

A method of selecting compounds modulating the activity of PDK1-like kinases, the compounds identified with the method and the use of these compounds.

**2. Claims: 17-18 (fully)**

A method to assess the activation state of a protein kinase, based on the structure coordinates.

**3. Claims: 19-32 (fully); 33-37 (partially)**

Mutated PDK1-like protein kinases, wherein specific residues of the hydrofobic pocket or phosphate binding pocket are mutated.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Continuation of Box I.2

Claims Nos.: 33, 34 (in full); 35-37 (in part, in as far as referring back to claim 33)

Present claims 33, 34 (in full) and claims 35-37 (in part, in as far as referring back to claim 33) relate to a compound defined by reference to a desirable characteristic or property, namely "identified or identifiable by a method according to claims 1-16, 28 or 29"

The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for no such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the screening methods per se.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0144497	A	21-06-2001	AU 2187301 A EP 1234188 A2 WO 0144497 A2 JP 2003516760 T US 2003143656 A1	25-06-2001 28-08-2002 21-06-2001 20-05-2003 31-07-2003
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